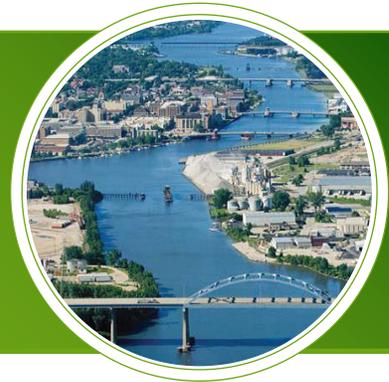


# Green Bay Police Expands Citywide Security Surveillance Network



## Situation

The Green Bay Police Department wanted to increase security at the Port of Green Bay, as well as throughout the city, through an expandable video surveillance system that would enable them to easily deploy additional cameras as the need arose and funding became available. “From increased security at the Port to managing the crowds at our downtown festivals to keeping an eye on the bridges, we are looking for a cost effective solution that would provide full coverage,” says Lieutenant Paul Ebel, Green Bay Police.

## Solution

Green Bay Police implemented a Cambium Networks Wireless Broadband Point-to-Multipoint (PMP) 100 Series system to establish a platform for a citywide video surveillance solution. The solution allows the police to enhance and extend its broadband wireless networks, adding “last mile connectivity” to facilitate delivery of video services, security surveillance, and high-speed broadband Internet access throughout the city. “I’ve worked with a lot of technologies,” says Jason Pedersen, Broadband Sales Engineer, Baycom. “With its advanced encryption and high rate of interference tolerance, the Cambium Wireless Broadband solution is more secure, more stable, easily expandable, and has the greatest capabilities.”

## Result

With the wireless broadband infrastructure in place, adding remote locations or moving nomadic cameras is easy, allowing the city to cost-effectively expand the original seven cameras to provide coverage of the entire Green Bay area. The police can also securely tap into the city’s water department surveillance system for additional coverage. The surveillance solution provides a mix of fixed and movable cameras and has enabled the police to speed response and situational awareness, increase productivity without staffing increase, and measurably reduce operational expense.

## Increasing Security

Since 1634, the Port of Green Bay has served as the most direct route for shipments between the world and the Midwestern United States. The western most port of Lake Michigan, the Port of Green Bay received 2.2 million metric tons of cargo, including 302,085 metric tons of international cargo consisting of salt, wood pulp, pig iron and fuel oil from the 180+ ships that arrive at the port each year.

## CUSTOMER PROFILE:

Video Surveillance for downtown area, events and bridges.

Cambium Networks Point-to-Multipoint (PMP) 100 Series wireless broadband for communications infrastructure to provide video surveillance for a 3.3 mile corridor.

But Green Bay is more than the Port. The city covers 46.1 square miles and is the population center of more than 245,000 residents within Brown County. In addition to a thriving downtown, 455 miles of roadways, and the city's east and west sides are connected by six bridges that span the Fox River.

“We needed a way to more effectively monitor security throughout the city,” says Lieutenant Ebel. “From increased security at the Port to managing the crowds at our downtown festivals to keeping an eye on the bridges, we were looking for a cost-effective solution that would cover the city.”

The department wanted a solution that was easily expandable and would let them deploy additional cameras as the need arose and the funding became available.

“We looked at a number of different possibilities that would cover a 3.3 mile corridor,” says Lieutenant Ebel. “Running fiber optics was out of the question at a cost of up to \$75,000 per mile and we didn't like the idea of T1 lines because of the monthly charge.”

## Video Surveillance with Immediate Results

In 2005, the Green Bay Police implemented a Cambium Networks Wireless Broadband Point-to-Multipoint system to establish a platform for a citywide video surveillance solution. The Cambium Networks Wireless Broadband platform enables the police to enhance and extend its broadband wireless networks, adding “last mile connectivity” to facilitate delivery of video services, security surveillance, and high-speed broadband Internet access throughout the city. Baycom, Inc., a Cambium Networks authorized channel partner, built the wireless infrastructure, backbone, storage network, video infrastructure and installed the cameras.



Seven cameras were initially placed along the Fox River and the bay of Green Bay from atop the existing police department tower at the southern side of the city and to the city's water tower on the north. The project, as well as later expansions, was funded through a Homeland Security Grant program.

On a day-to-day basis, the department uses the cameras to monitor ships coming into and out of the port. Working with Customs and Border Protection, who meet each ship and conduct an inspection, the Green Bay police use the cameras to monitor pedestrian, facility, and vehicular traffic to ensure that no unauthorized individuals disembark on U.S. soil.



“Even the mayor has requested cameras in City Hall. If there is a disturbance or an event that occurs there, we can dispatch officers to the site with a better understanding of the situation, as well as provide evidential data to review later.”

**LIEUTENANT BILL BONGLE, GREEN BAY POLICE DEPARTMENT**

The Point-to-Multipoint wireless network has enabled the Green Bay Police to monitor not only the port, but most of the city as well. “Some of the cameras are located on the three main bridges that cross the Fox River,” says Lieutenant Ebel. “We have actually witnessed accidents on cameras and dispatched patrols to the site before anyone even called it in.”

## Easy and Cost Effective

The solution has already proved its worth, showing immediate results. Responding to growing problems with gang graffiti, the police mounted one of the cameras in a park on the city’s east side. The graffiti problem stopped immediately and even after moving the camera to a different location, the police have received no further complaints.

“All of a sudden, all of the aldermen wanted cameras located in their own parks,” says Lieutenant Ebel. With the infrastructure in place, adding remote locations or moving nomadic cameras is easy and today, the city has expanded the original seven cameras to more than twenty, providing additional coverage of the entire Green Bay area.

“Adding a remote location is relatively simple to do,” says Steve Meadowcroft, IT director, Green Bay Police. “We can put up cameras on a tower or mount them on an antenna. Basically you drop in the camera, do some wiring, and the site is up and rolling in a matter of hours.”

The Green Bay police are also collaborating with the city’s water department to add even more coverage. The city’s water department deployed its own Cambium Wireless Broadband system, which now intersects with the police system to even further increase the total number of cameras available for security surveillance throughout Green Bay. In the event of an emergency, each organization has immediate, secure access to the other’s cameras.



## Enabling Multi-Agency Collaboration

Every three years, the U.S. Coast Guard and other federal, state and local agencies and industry personnel in Green Bay participate in an Area Maritime Security Training and Exercise Program to test port security. The police were able to leverage the surveillance system to connect to the command post, enabling full collaboration and coordination among all participating agencies throughout the drill.

## Other Benefits Include:

**Faster response** – Fast response is critical to first responders' ability to save lives and avert disaster. The city operates three lift span bridges that cross the Fox River. The bridges swing out to let trains cross the river and back in to allow ship traffic to cross the channel. Recently, an intoxicated pedestrian trying to cross the river mistakenly walked onto a train bridge after a train had just crossed. Lost and confused, the pedestrian called 911 from his cell phone but was unable to tell Dispatch his location. "We managed to focus the cameras in the direction where we thought he was, zoomed in on him, and sent a patrol out to bring him in," says Lieutenant Ebel.

**Increased productivity** – Keeping eyes on the scene without having to place patrol cars in the area is a force expander. During construction of Green Bay's \$12M River Walk project, part of the downtown improvement initiative, Public Works asked the police to monitor the work site. Moving a nomadic video camera to the site, the police are able to maintain continuous surveillance at minimal cost to the city and without adding manpower. In addition, the consultant, working from Boston, is able to oversee the project by logging in via the Internet and monitoring progress rather than traveling from Boston to Green Bay on a weekly basis.

**Reduced operational expense** – In addition to video surveillance access, the Point-to-Multipoint system also provides high speed broadband to mobile operations. The Green Bay Police set up a permanent command post at Lambeau Field. The operation used to require the department to post an extra hand at the station to handle requests for criminal checks, and then send the information via dial-up connection back to the command post. "Cambium's Wireless Broadband system now gives us a direct and secure high-speed broadband connection from Lambeau Field to the station, so we can run those checks ourselves," says Lieutenant Bill Bongle. "That not only improves productivity, it also reduces payroll expenses."

## What's Next?

The Green Bay Police plan to continue expanding the system to focus additional cameras on the downtown area and replace obsolete cameras around the police department.

"Even the mayor has requested cameras in City Hall," says Lieutenant Bongle. "If there is a disturbance or an event that occurs there, we can dispatch officers to the site with a better understanding of the situation, as well as providing evidential data to review later."

The Cambium Wireless Broadband Point-to-Multipoint solution delivers secure, reliable, cost-effective high speed connectivity to multiple locations. Once the platform is in place, expansion is quick, easy and cost-effective, requiring no further infrastructure investment.

"This gives us more eyes on the street and acts as a force multiplier," says Lieutenant Ebel. "With the video surveillance cameras running over the Cambium Networks system, we are able to increase security and improve response time without expanding our staff."

